HP recommends Windows Vista® Business

HP XW9400 WORKSTATION

Uncompromised graphics performance and maximum expandability with AMD64; now with Quad-Core

The HP xw9400 Workstation delivers extreme solution performance for the largest and most intensive workloads. Combining HP innovation with the most advanced dual- and native quad-core AMD Opteron™ processors[1], the HP xw9400 meets the combined needs for computation and visualization power and I/O performance while helping to lower total cost of ownership.

Extraordinarily powerful
Improve your workflow efficiency and tackle large-scale challenges with fast design and analysis turnaround.

- AMD's Direct Connect Architecture addresses and minimizes traditional system architecture bottlenecks by optimizing and balancing throughput performance
- Fully-duplexed dual PCIe x16 ports support two high-end graphics cards and enable up to four 3D displays or one display using NVIDIA SLI Technology

Uniquely versatile
Easily expand the HP xw9400 Workstation to help you realize greater time and cost savings and future readiness:

- Supports up to five hard drives, eight built-in SAS ports with RAID capabilities, and two PCI-e x8 interfaces
- Low-acoustic and space-efficient design helps you optimize your work environment with thermal efficiency and less noise
- Optional HP Liquid Cooling delivers high-performance at improved acoustic levels

Definitively reliable
Work more productively and confidently on a stable, long-lifecycle platform with world-class engineering, software solutions, and support.

- In-depth engineering and technical relationships with ISVs to test and certify applications, OS, and hardware configurations assist in delivering faster, more reliable applications
- HP Performance Tuning Framework, preinstalled on systems with Microsoft® Windows® XP, is an easy-to-use tool that guides workstation setup and custom configuration to help increase performance of select applications

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Form factor	Rackable minitower
Operating systems	Genuine Windows Vista® Business 32-bit with downgrade to Windows® XP Professional 32-bit custom installed* Genuine Windows Vista® Business 64-bit with downgrade to Windows® XP Professional x64 custom installed* Genuine Windows Vista® Business 32-bit** Genuine Windows Vista® Business 64-bit** HP Installer Kit for Linux (includes drivers for both 32-bit and 64-bit OS versions of Red Hat Enterprise Linux WS4 and WS5)
Available processors	One or two Dual-Core[1] AMD Opteron™ 2000 series[2] processors 2220 (2.80 GHz) and 2222 (3.00 GHz) with AMD64 Technology[2], 1 MB of L2 cache, and 1 GHz AMD HyperTransport™ technology[3]; one or two Quad-Core[1] AMD Opteron™ 2000 series[2] processors 2376 (2.3 GHz), 2378 (2.4 GHz), 2380 (2.5 GHz), 2384 (2.7 GHz), 2387 (2.8 GHz), and 2389 (2.9 GHz) with 1 GHz AMD HyperTransport™ bus 6 MB L3 cache
Chipset	NVIDIA nForce Professional 3600 and NVIDIA nForce Pro 3050
Memory[4]	Up to 64 GB of ECC registered DDR2 667 MHz SDRAM in 8 DIMM slots (a max. of 32 GB with one processor)
Drive controllers	Integrated SATA 3 Gb/s controller (6 channels) with RAID 0, 1, 5 and 10 capability[5]; Integrated SAS controller (8 channels) with opt. external connector and RAID 0, 1, and 10[5]
Hard drive(s)[6]	Up to 5 SATA drives supported natively (5 TB max.); 80, 160 GB (10K rpm) SATA 1.5 Gb/s, 300 GB (10K rpm) 2.5" SATA 3.0 Gb/s, or 80 GB (7200 rpm) 3.0 Gb/s, or 160, 250, 500, 1000 GB (7200 rpm) SATA 3 Gb/s NCQ; or up to 5 Serial Attached SCSI (SAS) drives supported natively (2.25 TB max.); 146, 300 GB (10K rpm) or 73, 146, 300, 450 GB (15K rpm) SAS drives (Native Command Queuing not supported in Red Hat Enterprise Linux)
Optical drives	DVD-ROM and SATA DVD+/- RW SuperMulti[7]
Drive bays	3 external 5.25-inch bays (opt. StorCase enclosure enables 3.5-inch SATA drive to be added to 5.25-inch bay), 5 internal 3.5-inch bays
Slots	7 slots: 2 PCI Express (PCIe) x16, 2 PCI Express x16 mechanical/x8 electrical; 2 PCI-X 100 MHz slots, or 1 PCI-X 32-bit/33 MHz slot, exclusive; 1 full-length PCI
Graphics (Up to two cards)	**Professional 2D:** NVIDIA Quadro NVS 290 (256 MB) **Entry 3D:** NVIDIA Quadro FX 570 (256 MB) **Mid-range 3D:** NVIDIA Quadro FX 1700 (512 MB) **High-end 3D:** (SLI for NVIDIA Quadro supported), NVIDIA Quadro FX 3700 (512 MB), NVIDIA Quadro FX 4800 (1.5 GB), NVIDIA Quadro FX5600 (1.5 GB), and NVIDIA Quadro FX 5800 (4 GB)
Audio	Integrated High Definition audio with jack retasking capability; optional HP Thin USB Powered Speakers; SoundBlaster X-Fi XtremeGamer Audio Card
Network[8]	Dual Integrated NVIDIA (nForce Pro 3600) Gigabit LAN, Dual NVIDIA Gigabit LAN-On-Motherboard, opt. Broadcom 5751 NetXtreme Gigabit PCIe NIC
Ports	**Front:** 2 USB 2.0, IEEE 1394a, Microphone In, Audio Out **Rear:** 6 USB 2.0, IEEE 1394a, 1 standard serial port, PS/2 keyboard and mouse, 2 RJ-45 to integrated Gigabit LAN, Audio In, Audio Out, Mic In **Internal:** 2 USB 2.0 (1 std. connector, 2nd requires "Internal USB" Kit for connect to USB device)
Input devices	USB Optical Scroll Mouse; USB 3-Button Optical Mouse; USB SpaceMouse; USB SpaceBall; USB SpacePilot; USB Laser Scroll Mouse; HP PS/2 Optical Scroll Mouse
Dimensions (H x W x D)	17.9 in (45.5 cm) x 8.3 in (21.0 cm) x 20.7 in (52.5 cm)
Power supply	1050 watts; 80 PLUS percent efficient
Compliance and regulatory	ENERGY STAR® qualified configurations, EPEAT™ Gold
Monitors (diagonally measured)	HP LP1965 19-inch LCD Monitor; HP LP2065 20-inch LCD Monitor; HP LP2275w 22-inch Widescreen LCD Monitor; HP LP2475w 24-inch Widescreen LCD Monitor; HP DreamColor LP2480zx Professional Display (24-inch widescreen); HP LP3065 30-inch Widescreen LCD Monitor
Warranty	Basic three years next business day, parts, labor, and 8x5 phone support; terms and conditions may vary, certain restrictions apply. HP Care Pack Services extend service contracts beyond the standard warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at http://www.hp.com/go/lookuptool. Additional HP Care Pack Services information by product is available at http://www.hp.com/hps/carepack.

*Certain Windows Vista product features require advanced or additional hardware. See www.microsoft.com/windowsvista/getready/hardwarereqs.mspx and www.microsoft.com/windowsvista/getready/capable.mspx for details. Windows Vista Upgrade Advisor can help you determine which features of Windows Vista will run on your computer. To download the tool, visit www.windowsvista.com/upgradeadvisor. Windows Vista Business disk may also be included for future upgrade if desired.
**To qualify for this downgrade an end user must be a business (including governmental or educational institutions) and is expected to order at least 25 customer systems with the same custom image.

[1] Dual- and Quad-Core are new technologies designed to improve performance of multithreaded software products and hardware-aware multitasking operating systems and may require appropriate operating system software for full benefit. Not all customers or software applications will necessarily benefit from use of this technology.
[2] AMD's numbering is not a measurement of clock speed.
[3] Actual bus clock rate is less. Listed bus speed represents the effective data transfer rate.
[4] Dual Channel is only supported when the system is configured with DDR2 symmetric memory (i.e. 2 x 256).
[5] Hardware RAID is not supported on Linux systems. The Linux kernel, with built-in software RAID, provides excellent functionality and performance. It is a good alternative to hardware-based RAID. Please visit http://h20000.www2.hp.com/bc/docs/support/SupportManual/c00060684/c00060684.pdf for RAID capabilities with Linux.
[6] For hard drives, 1 GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 8 GB of hard drive (or system disk) is reserved for the system recovery software (XP and XP Pro). Up to 12 GB of system disk is reserved for system recovery software. (Vista).
[7] Actual speeds may vary. Does not permit copying of commercially available DVD movies or other copy-right protected materials. Intended for creation and storage of your original material and other lawful uses. Note that DVD-RAM cannot read or write to 2.6 GB single sided/5.2 GB double sided – version 1.0 media.
[8] The term "10/100/1000" or "Gigabit" Ethernet indicates compliance with IEEE standard 802.3ab for Gigabit Ethernet, and does not connote actual operating speed of 1 Gb/sec. For high speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.
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